

REMARKS

Claims 1 and 20-43 are pending. Of these claims, Claims 26-32 have been allowed. Claims 1 and 20-25 have been rejected under 35 U.S.C. § 103 over Cartier (U.S. Patent No. 4,767,177) or over Bouygues et al. (U.S. Patent No. 4,139,260).

Allowance of Claims 26-32

The Office Action summary indicates that Claims 26-32 are allowed. We believe that this is correct. However, the detailed action at page 2, under "Allowable Subject Matter," indicates that Claims 26-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations from the base claim and any intervening claims. Applicants respectfully note that Claim 26 is an independent claim, and that Claims 27-32 depend therefrom. Thus, applicants respectfully submit that Claims 26-32 are allowable in their current form.

Claims 1 and 20-25 Are Not Obvious Over Cartier

Applicants respectfully submit that Cartier does not have the present invention in mind. The present invention, as set forth in Claim 1, includes a first ferrule that has an optical fiber-inserting hole, and a second ferrule that has an optical fiber-inserting hole. The second ferrule is arranged opposing to the first ferrule so that the optical fiber-inserting holes of the two ferrules are positioned coaxially to each other. Moreover, the end portion of the first ferrule has a male convex shape and the end portion of the second ferrule has a correspondingly female concave shape for receiving the end portion of the male ferrule therein to make tight connection between the male and female end portions of the first and second ferrules.

The Office Action asserts that Cartier teaches ferrules used for an optical fiber connector. In this regard, item 1 is said to be a first ferrule that has an optical fiber-insertion hole and item 12 is said to be a second ferrule which has an optical fiber-insertion hole. Moreover, the

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end of the first ferrule is said to have a convex shape and the end of the second ferrule is said to have a female concave shape.

Applicants respectfully submit that the foregoing description of Cartier was not accurate. Applicants do agree that in Cartier, item 1 is a first ferrule; however, item 12 is not a second ferrule. Rather, item 12 is a bushing to temporarily support tubular element 5 of the fiber optic element 15 within the oversized axial bore 4 in ferrule 1, while a deformable element 9, positioned within cross-bores 7, is pressed against concave groove portions 8 of the tubular element 5 by presses or punches 11 extending radially inwardly through the cross-bores 7. Accordingly, item 12 is not part of a ferrule connection for an optical fiber connector.

Nonetheless, Claim 1 has been amended to further define the present invention and more clearly distinguish it from the cited Cartier patent. In this regard, Claim 1 has been amended to specify that the optical fiber-inserting hole in the second ferrule is of substantially the same diameter as the optical fiber-inserting hole of the first ferrule. As is clear from Figure 1, the diameter of axial bore 4 in ferrule 1 is substantially larger than the diameter of the axial bore shown in bushing 12.

Moreover, Claim 1 has been amended to specify that the convex male shape of the end portion of the first ferrule extends to the end of the first ferrule end portion. On the other hand, in Cartier, a tubular extremity 13 projects forwardly from the convex portion 3 of bushing 12. The tubular extremity 13 is not convex, but of constant diameter. Accordingly, Claim 1, as amended is neither disclosed nor suggested by Cartier.

Bouygues et al. also does not disclose nor suggest the present invention. This reference shows in Figure 1 a male portion of an optical fiber connector and, in Figure 2, the complementary female portion of the connector. In the male portion of the connector shown in Figure 1, the left-hand portion constitutes the male section that engages within the female section

shown in the right-hand portion of Figure 2. The male portion is not convex in shape, but is of a constant exterior diameter. Correspondingly, the female portion shown in Figure 2 is not a concave shape, but constitutes a fixed internal diameter. Accordingly, Bouygues et al. does not disclose or suggest the present invention as set forth in Claim 1.

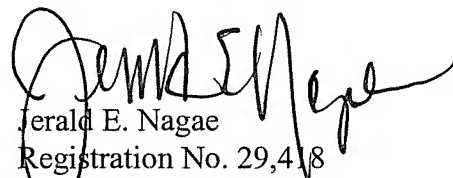
The Office Action identifies item 13 in Bouygues as having a conical section 133. Such conical section is not used to connect first and second ferrules together, rather, simply to help assist in fitting bundle of fibers 1 into drilling 132 of the internal component 13. See Col. 3, lines 60-67.

For at least the foregoing reasons, applicants respectfully submit that the Claim 1 as amended is neither disclosed nor suggest by the cited references. Moreover, Subclaims 20-25 depend directly from Claim 1. Accordingly, these claims also should be found allowable.

Applicants respectfully request that all of the pending claims in the present application are now in condition for allowance and early reconsideration to this end is respectfully requested. If the Examiner has any questions concerning the foregoing, the Examiner is requested to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

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